

Environmental Assessment Narrative

VPDES Individual Permit Modification

MLK Expressway Extension

Initial Hazardous Materials Investigation Report

The pre-construction investigation and waste characterization were designed to provide sufficient information to determine the occurrence, approximate quantities, and regulatory classification of impacted soil and groundwater likely to be encountered during construction of the Project.

The results for the MLK Corridor are divided into the following nine geographic areas:

- SWM Pond 8 - includes the VDOT ROW north of Frederick Boulevard and East of I-264, where proposed stormwater management (SWM) Pond 8 is planned.
- I-264 Bridge Over Norfolk & Portsmouth Belt Line Rail Road - includes a portion of the Norfolk & Portsmouth Belt Line (NPBL; Parcel 006) and the City of Portsmouth Vehicle Maintenance Facility (Parcel 005).
- Portsmouth Redevelopment and Housing Authority and SWM Pond 14 - includes Parcels 007, 008, 009, and 010 as well as the adjacent VDOT and City of Portsmouth ROWs.
- Ramp SW and MLK Mainline - includes the CSX Vacant Lot (portion of Parcel 12 between the HERC/BCSC (Parcel 13) and Murro Chemical properties), and the adjacent VDOT ROW along Columbus Avenue.
- Ramp WM and SWM Ponds 19 and 20 - includes the portion of CSX Rail Yard (Parcel 12) and the northeast portion of the HERC/BCSC property (Parcel 13) along proposed Ramp WM, Parcels 015, 082, 017, and the adjacent VDOT ROW along Columbus Avenue.
- CSX and Vulcan Properties - includes the CSX Rail Yard (Parcel 12) and the Vulcan lease area in the northern part of Parcel 012.
- Old Dominion Demolition and SWM Pond 24 - includes the Old Dominion Demolition property (Parcels 024 and 026) and the proposed location of SWM Pond 24 (Parcels 025, 027, 028, and 029).
- South Harbor Drive and SWM Pond 25 - includes all ROW parcels located along Harbor Drive south of County Street to Turnpike Road, the parcels within the proposed SWM Pond 25, and the VDOT and City of Portsmouth ROW along adjacent roadways.
- North Harbor Drive and SWM Pond 30- includes all parcels located along Harbor Drive north of County Street to London Boulevard as well as the VDOT ROW at the proposed SWM Pond 30.

Environmental Assessment Narrative

VPDES Individual Permit Modification
MLK Expressway Extension

The soil and groundwater samples were analyzed for a variable suite of COPC based on previous investigations. Selected soil samples were also analyzed for waste characteristics to confirm the regulatory classification of the soil materials. The sampling and analysis plan included in the investigation work plan was developed based on the recently completed CLER Report (EEE, 2012a), previous investigations completed by Marshall Miller & Associates (MMA, 1997, 1998b, 2009, and 2010) and EEE (2011a), the Virginia Solid Waste Management Regulations (VSWMR), the Virginia Hazardous Waste Management Regulations (VHWMR), and the Waste Characterization Plan developed by Conley Environmental Corporation (CEC, 2012) for the MTT Approach Areas.

The main purpose for selecting the specified laboratory analyses was to collect sufficient laboratory data to characterize soil and groundwater that may be encountered within the MLK Corridor during construction activities in accordance with local, state, and federal regulations. The main COPCs identified in the MLK Corridor consist of petroleum constituents and solvents associated with the current and former commercial and industrial operations as well as the occurrence of underground petroleum storage tanks. Therefore, all soil and water samples were analyzed for the following suite of petroleum constituents:

- Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO) using Method 8015B;
- Total Petroleum Hydrocarbons-Gasoline Range Organics (TPH-GRO) using Method 8015B;
- Benzene, Toluene, Ethyl benzene, and Xylenes (BTX) using Method 8260B;
- Oil and Grease using Method 1664A/9071B;
- Extractable Organic Halides (EOX) in soils using Method 9023 or Total Organic Halides (TOX) in groundwater using Method 9020B.

At several commercial automotive and mechanical businesses along the south portion of Harbor Drive, and the industrial and railroad properties located south of Turnpike Road, a wider range of COPC were selected for analysis of some soil and groundwater samples. Additional analyses were performed on the selected soil and groundwater samples from borings within the proposed SWM ponds where significant volumes of soil may be excavated and construction dewatering will likely be required. These additional analyses consisted of:

- Volatile Organic Compounds (VOCs) using Method 8260B;
- Semi-Volatile Organic Compounds (SVOCs) using Method 8270C;
- Polychlorinated Biphenyls (PCBs) using Method 8082
- Total RCRA Metals using Method 6010B and total Mercury using Method 7470A/7471A

A previous investigation of the corridor identified storage of pesticides as COPC on Parcel 009, the Portsmouth Redevelopment and Housing Authority (PRHA) property. To determine the occurrence of

Environmental Assessment Narrative

VPDES Individual Permit Modification

MLK Expressway Extension

pesticide/herbicide impacts, the following additional analyses were performed on soil and groundwater collected from this parcel:

- Herbicides using Method 8151A
- Organochlorine Pesticides using Method 8081A

Hazardous Materials Investigation Report for the HERC Property

The principal objectives of the HERC/BCSC hazardous material investigation were to determine the nature and extent of potential soil and groundwater contamination within the HERC/BCSC Property, provide sufficient information regarding the occurrence, approximate quantities, and regulatory classification of contaminated soil and groundwater that may be encountered during construction, and to determine the potential effect of any such soil and groundwater contamination on the proposed SWM Ponds 19 and 20, and associated appurtenances.

The main COPCs identified at the HERC/BCSC Property consist of petroleum constituents and solvents associated with the former commercial and industrial operations. Each soil and groundwater sample collected at the HERC/BCSC property was analyzed for the following constituents:

- Total Petroleum Hydrocarbons-Gasoline Range Organics (TPH-GRO (C6 – C10)) using Method 8015B
- Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO (C10 – C28)) using Method 8015B
- Total Petroleum Hydrocarbons-Oil Range Organics (TPH-ORO (C20 – C36)) using Method 8015B
- Oil and Grease using Method 1664A/9071B
- Volatile Organic Compounds (VOCs) using Method 8260B
- Semi-Volatile Organic Compounds (SVOCs) using Method 8270C
- Polychlorinated Biphenyls (PCBs) using Method 8082
- Dissolved Target Analyte List (TAL) Metals using Method 6010/6020 and Mercury using Method 7470A/7471A
- Cyanide using Method 9010/9014

Requested Additional Groundwater Testing

VDEQ requested that additional dissolved lead and arsenic data be provided at one sampling location, 3E-008-06W, that had elevated total concentrations of these two metals. Additionally, it was requested that a representative number of samples be taken and tested for copper and nickel. These boring numbers are highlighted in yellow on the results sheet included in this application.